

Task Order	MMS Issue Addressed	Monitoring Hypotheses	Methods	Key Monitoring Result or Parameter for Decision Making
004-“Partitioning of Potential Contaminants between Dissolved and Particulate Phases in the cANIMIDA Study Area”	Will offshore oil development and production at Northstar and potential development at Liberty result in increased or chronic loadings of dissolved contaminant metals or hydrocarbons?	<p>H1: Concentrations of dissolved and particulate metals and selected organic substances in waters near offshore oil- and gas-related activities in the coastal Beaufort Sea are not significantly different than in more remote, coastal waters of the Beaufort Sea.</p> <p>H2: Concentrations of dissolved metals collected across the freshwater/seawater mixing zone plot on a linear mixing curve versus salinity with concentrations in river water and seawater as end-members (i.e., conservative mixing).</p> <p>H3: Concentrations of dissolved and particulate metals and selected organic substances in waters of the coastal Beaufort Sea follow measurable and predictable distribution coefficients (<math>K_d</math>).</p> <p>H4: Bioaccumulation of trace metals by mussels, kelp and plankton is directly proportional to levels of dissolved metals in the water.</p>	Discrete sampling of rivers and the coastal Beaufort Sea during the ice-covered and open-water periods with analysis of water for metals and petroleum hydrocarbons.	<p>Annual interpretative report with tabulated data will be provided, with statistical tests of potential interannual significant differences.</p> <p>Contractor will alert MMS COTR of any important trends or changes.</p>